IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) A method comprising:

modeling a circadian rhythm,

calculating a cognitive level of a person based on the person's sleep/wake data,

calculating a predicted cognitive performance based on said circadian rhythm and said cognitive level.

2. (Currently Amended) A system ~~for performing the method according to claim 1, said system~~ comprising:

at least one input device for entering sleep/wake data,

a microprocessor including

means for modeling a circadian rhythm,

means for calculating a cognitive level of a person based on the person's sleep/wake data, and

means for calculating a predicted cognitive performance based on said circadian rhythm and said cognitive level, and

a display to show the predicted cognitive performance.

3. (Previously Presented) A computer-readable medium having computer-executable instructions for predicting a cognitive performance level of an individual, the computer-executable instructions comprising:

first program instruction means for modeling a circadian rhythm,

second program instruction means for calculating a cognitive level of a person based on the person's sleep/wake data, and

third program instruction means for calculating a predicted cognitive performance based on said circadian rhythm and said cognitive level.

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34. (Cancelled)

35. (Previously Presented) A method for providing a cognitive performance level comprising:

receiving a data series representing at least one wake state and at least one sleep state,

selecting a function based on the data series, wherein the function is selected from a group consisting of a wake function, a sleep function, and a sleep inertia function, where

the wake function is expressed as follows

$$w(t) = C_{t-1} - k_w$$

where k_w is a positive function,

the sleep function is expressed as follows

$$s(t) = C_{t-1} + (100 - C_{t-1}) / k_S$$

where k_S is a time constant, and

the sleep inertia function is expressed as follows

$$i(t) = C_{SW} * [0 .75 + 0.025 (t - t_{LS}) - (0.025 (t - t_{LS}))^2]$$

where t_{LS} is time when the last sleep state occurred and C_{SW} is the cognitive level at the last sleep state,

determining a cognitive performance capacity using the selected function,

modulating the cognitive performance capacity with a time of day value, and

providing the modulated value.

36. (Cancelled)